CLIMATE ACTION TEAM
Energy Working Group
Near-Term Implementation Plan

Scoping Plan Measures E-3, E-4, CR-2
CAS Strategy - Infrastructure #1 and 2
Renewable Resource Development

CAT Working Group Overview: The Energy Working Group of the Climate Action Team focuses its efforts on both green house gas emission reduction and adaptation actions affecting the energy sector.

Working Group Agencies: ARB, Cal/EPA, CPUC, CAISO, Energy Commission, Resources.

Measure / Strategy

A) Description: The Renewable Resource Development strategy involves several programs currently underway to encourage the development of new efficient renewable energy technologies in the least sensitive environmental areas. Programs encourage de-centralized generation and on-site renewable energy generation systems where appropriate.

B) Agencies Involved: California Energy Commission, California Public Utilities Commission, and Air Resources Board. California Independent System Operator is involved in the following crosscutting issues: transmission planning, interconnection of renewable distributed generation, integrating renewable resources.

C) Scoping Plan/Adaptation Plan Reference: Measure No. E-3, Renewables Portfolio Standard; Measure No. E-4, Million Solar Roofs; and Measure No. CR-2, Solar Water Heating. Climate Adaptation Strategy 1b and 2b.

D) Metrics: The primary metrics for these programs will be Gigawatt hours (GWh) of renewable electricity delivered (e.g. Renewable Portfolio Standard); Megawatts (MW) of renewable capacity installed (e.g. California Solar Initiative); and solar water heating systems installed (e.g. CSI Thermal). In most cases, the programs included in this strategy have defined targets for the amount of renewable energy deployed or generated, and progress towards these targets is measured and tracked on an ongoing basis. Each program is described further below as a separate task, and the program targets and timelines are discussed.

E) Crosscutting Issues: Permitting renewable energy facilities (CEC, US BLM, and Counties, depending on technology and size of project); transmission planning (RETI, CTPG, CEC, CPUC, CAISO); interconnection of renewable distributed generation (CPUC, CAISO); integrating renewable resources (CA ISO).

F) Tasks and Deliverables:

Task 1: 20% Renewable Portfolio Standard (RPS)

1. Description: Public Utilities Code Section 399.11 – 399.19, established in 2002 under Senate Bill (SB) 1078 and modified in 2006 under SB 107, requires investor-owned utilities (IOUs), electric service providers (ESPs) and community choice aggregators (CCAs) regulated by the California Public Utilities Commission (CPUC) to procure an additional 1% of retail sales per year from eligible renewable sources until 20% is reached, no later than 2010. The CPUC and the California Energy Commission are jointly responsible for implementing the program. POUs are required to establish their own RPS programs.

2. Deliverables: The RPS aims to procure 20% of retail electricity sales from renewable resources.

3. Agency Roles: The CPUC and CEC are both responsible for implementation of the non-POU RPS. The CPUC primarily oversees the utility procurement process. CEC certifies specific renewable power plants as eligible to satisfy RPS requirements and verifies that retail sellers' (not POU) RPS claims are not double counted. POUs are required to submit reports to the CEC on progress they have made toward achieving their RPS goals.

4. Timeline: The law sets a deadline for reaching 20% RPS was 2010 and authorizes the CPUC to establish flexible compliance rules. The CPUC flexible compliance rules allow retail sellers three years to meet each year's RPS procurement requirements. Revised estimates by the CPUC indicate that the IOUs will meet 20% RPS by 2013-2014.

Task 2: 33% Renewable Electricity Standard

1. Description: Governor Schwarzenegger directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the state's load serving entities to meet a 33 percent renewable energy target by 2020. ARB may consider different approaches that would achieve the objectives of the Executive Order. This could include increasing the target and accelerating and expanding the time frame based on a thorough assessment of technical feasibility, system reliability, cost, greenhouse gas emissions, environmental protection, and other relevant factors.

2. Deliverables: The RES aims to procure 33% of retail electricity sales from renewable resources.

3. Agency Roles: The Executive Order commits ARB staff to work with the Public Utilities Commission, the California Energy Commission, the California Independent System Operators and others in the development of the regulation.

4. Timeline: ARB is scheduled to adopt the regulation on July 22, 2010. The target date for achieving 33 percent retail electricity sales is 2020.

Task 3: California Solar Initiative (CSI)

1. Description: Governor Schwarzenegger's "Million Solar Roofs Initiative" to advance renewable distributed generation in California, was codified in Senate Bill 1 (SB 1) as the California Solar Initiative (CSI). SB 1 directs total expenditures of up to $3.3 billion by 2017, with goals of installing 3,000 megawatts of distributed solar energy systems and establishing a self-sufficient solar industry within 10 years. The CSI programs include: the Publicly Owned Utility (POU) CSI programs; the CEC New Solar Homes Partnership; and the CPUC CSI program in Investor Owned Utility (IOU) territories , which in turn has several subprograms including the solar thermal program, programs directed at single and multifamily affordable housing, and research, development and deployment programs.

2. Deliverables: The CPUC CSI program has a goal of installing 1940MW of distributed solar by the end of 2016. The POUs have a goal to collectively install 700 MW of distributed solar by 2017. NSHP has a goal of installing 400 MW of solar capacity by the end of 2016 and foster sufficient market penetration in the new residential market so that 50 percent or more of new housing built by 2016 and thereafter will include solar systems.

3. Agency Roles: CPUC oversees the implementation of CSI for existing homes and all commercial customers in IOU territories. CEC oversees the implementation of the New Solar Homes Partnership (NSHP) for new homes. POUs oversee their own programs.

4. Timeline: The CSI is authorized through the end of 2016. Collection of funding for the NSHP is authorized through the end of 2011.

Task 4: California Solar Initiative Thermal program for Solar Water Heating

1. Description: AB 1470 (Huffman, 2007) required the CPUC to evaluate the California Solar Initiative Solar Water Heating pilot (SWH) program and make a determination on whether or not a solar water heating program is cost-effective for ratepayers and in the public interest. In January 2010, the CPUC approved a decision creating the CSI-Thermal Program, which allocates $350.8 million to promote SWH through a program of direct financial incentives to retail customers, training for installers and building inspectors, and a statewide marketing campaign. Incentives are available to customers who currently heat their water with electricity or natural gas in the service territories of PG&E, SCE, SDG&E, and Southern California Gas Company.

2. Deliverables: The program began accepting applications from single-family residential customers on May 1, 2010. The program expects to begin accepting applications from multi-family and commercial customers by June 1, 2010. The program has a goal of installing the equivalent of 250,000 residential solar water heating systems by 2017.

3. Agency Roles: CPUC is the lead agency overseeing and coordinating implementation of the CSI Thermal program, which is administered by program administrators in each of four IOU territories.

4. Timeline: The CSI Thermal program began accepting applications from single-family residential customers on May 1, 2010. Multi-family and commercial customers will be able

to begin submitting applications on June 1, 2010. The CSI Thermal program is authorized through the end of 2017.

Task 5: Self Generation incentive Program

1. Description: The CPUC's Self-Generation Incentive Program (SGIP) provides incentives to support existing, new, and emerging distributed energy resources. The SGIP provides rebates for qualifying distributed energy systems installed on the customer's side of the utility meter. Qualifying technologies currently include wind turbines, fuel cells, and energy storage systems combined with either wind turbines or fuel cells. In October 2009, the Governor signed Senate Bill (SB) 412 into law authorizing the CPUC, in consultation with ARB, to determine eligible technologies for the Self Generation Incentive Program (SGIP) based on the requirement that they "achieve reductions of greenhouse gas emissions pursuant to the California Global Warming Solutions Act of 2006."

2. Deliverables: The CPUC anticipates releasing a staff report including proposed program modifications in response to SB 412 sometime in Q2 or Q3 2010. A final decision adopting program changes is expected before the end of 2010. Program changes may include adding new GHG-reducing technologies to the program, modifying existing program eligibility criteria, or modifying other aspects of SGIP implementation to improve program outcomes.

3. Agency Roles: CPUC is the lead agency overseeing and coordinating implementation of SGIP, which is administered by program administrators in each of four IOU territories - PG&E, SCE, SDG&E, and Southern California Gas Company.

4. Timeline: CPUC expects to implement program changes pursuant to SB 412 by the end of 2010. SGIP is currently authorized through January 1, 2016.

Task 6: Renewable tariff development

1. Description: There are two types of "tariffs" currently available to facilitate deployment of small renewable generators, net energy metering (NEM) tariffs for customer generators serving customer load and feed-in-tariffs (FITs) for generators exporting power to the grid.
    a. There are two statutory changes to NEM tariffs that the CPUC is currently implementing. The first is Public Utilities Code Section 2830, which was created by AB 2466 (2008) and requires the CPUC to establish tariffs that allow a local governments to receive a bill credit to a designated benefiting account for electricity exported to the grid by an eligible renewable generating facility. The statute requires the commission to adopt tariffs for the benefiting account. In April 2010, the CPUC adopted a Resolution approving these Local Government Renewable Energy Self-Generation Bill Credit Transfer tariffs for all three IOUs in April 2010. The second is AB 920 (Huffman, 2009), which requires the CPUC to establish a rate for net surplus electricity from a customer generator participating in NEM. Currently NEM does not provide any payment to customers for net surplus compensation, since NEM was intended for customer generators serving customer load only. A ratemaking proceeding has been opened to establish a rate for net surplus compensation.

b. For small facilities that are primarily exporting electricity, feed-in-tariffs (FITs) require the utility to purchase exported power from eligible renewable facilities at a standard price. For RPS eligible facilities less than 1.5 MW, each of California's IOUs offers a FIT pursuant to PUC Section 399.20. This FIT is priced at the Market Price Referent. Recent legislation, SB 32 (2009, Negrete-McLeod) would expand eligibility for this program to facilities up to 3 MW, and allow the CPUC to adjust the price based on "environmental costs".

2. Deliverables: CPUC will establish a rate for net surplus compensation for NEM customer generators that export more electricity in a year than they consume. CPUC will also implement changes to the small renewables FIT pursuant to SB 32 for generators that export power to the utility grid. These tariff programs will provide additional opportunities for small renewable generators.

3. Agency Roles: CPUC is the agency responsible for IOU tariff-related issues and has several currently open proceedings addressing NEM and renewable FITs.

4. Timeline:
   a. CPUC has also opened a proceeding to establish a rate for net surplus compensation for NEM customers. A final decision adopting this rate is expected by the end of 2010.
   b. CPUC is expected to begin implementation of SB 32, including addressing price adjustment by the end of 2010.

G) SUMMARY TABLE:

Deliverable	Agencies	Deadline
20% retail electric sales from renewable resources	CPUC, CEC	2010 (revised estimate: 2013-2014)
33% renewable electric sales from renewable resources	ARB	2020
3,000 MW distributed solar installed	CPUC, CEC, POUs	December 31, 2016
Launch CSI Thermal program	CPUC	May 2010 (residential program); June 2010 (commercial and multifamily program)
SGIP program modifications pursuant to SB 412	CPUC	End of 2010
Net surplus compensation rate tariff pursuant to AB 920	CPUC	End of 2010
Expanded FIT for small renewables pursuant to SB 32	CPUC	End of 2010